

APPLICATION FOR UNITED STATES PATENT

**CUSTOMIZED CREDIT OFFER STRATEGY BASED ON TERMS**  
**SPECIFIED BY AN APPLICANT**

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**CUSTOMIZED CREDIT OFFER STRATEGY BASED ON TERMS  
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**CROSS REFERENCE TO RELATED APPLICATIONS**

This application is related to co-pending U.S. Patent Application No. 09/185,201 (Attorney Docket No. NEXTP001) entitled "Method And Apparatus For Real Time On Line Credit Approval" filed November 3, 1998, which is incorporated herein by reference for all purposes; and co-pending U.S. Patent Application No. 09/185,878 (Attorney Docket No. NEXTP002) entitled "Method And Apparatus For A Verifiable On Line Rejection Of An Applicant For Credit" filed November 3, 1998, which is incorporated herein by reference for all purposes; and co-pending U.S. Patent Application No. 09/185,000 (Attorney Docket No. NEXTP003) entitled "Method And Apparatus For An Account Level Offer Of Credit And Real Time Balance Transfer" filed November 3, 1998, which is incorporated herein by reference for all purposes.

**FIELD OF THE INVENTION**

The present invention relates generally to an online application for a credit card. More specifically, determining an offer based on user preferences is disclosed.

**BACKGROUND OF THE INVENTION**

On line credit card application and approval has greatly simplified the process of obtaining a credit card for an applicant. As described in U.S. Patent Application

“Method And Apparatus For Real Time On Line Credit Approval” which was previously incorporated by reference, U.S. Patent Application entitled “Method And Apparatus For A Verifiable On Line Rejection Of An Applicant For Credit” which was previously incorporated by reference, and U.S. Patent Application entitled “Method And Apparatus For An Account Level Offer Of Credit And Real Time Balance Transfer” which was previously incorporated by reference, multiple offers may be presented to an applicant and the applicant given the opportunity to select among the offers. The flexibility of this process is beneficial. It would be useful if the ability of the applicant to select a custom offer could be further enhanced so that such an offer provided to the applicant could have an even greater chance of acceptance.

## **SUMMARY OF THE INVENTION**

Accordingly, presenting an applicant with the opportunity to specify certain desired credit card terms is disclosed. In addition, the applicant may specify what term or terms are most important to the applicant. Alternatively, the applicant may specify the terms of a current credit card and indicate what terms the applicant would like to change, and, possibly, how those terms should be changed. The specified preferences are used by an offer generating server to select or generate an appropriate offer that will satisfy the applicant specified preferences to the extent possible.

In one embodiment, a customized offer is transmitted to an applicant. A requested term is obtained from the applicant and a set of offers is determined for the applicant. An offer is selected from among the set of offers to display to the applicant using the requested term and the selected offer is transmitted to the applicant.

In one embodiment, a customized offer is transmitted to an applicant. A requested term is obtained from an applicant and the requested term is fixed. A set of offers is determined with the fixed requested term. An offer is selected from among the set of offers to display to the applicant and the selected offer is transmitted to the applicant.

## **DETAILED DESCRIPTION**

A detailed description of a preferred embodiment of the invention is provided below. While the invention is described in conjunction with that preferred embodiment, it should be understood that the invention is not limited to any one embodiment. On the contrary, the scope of the invention is limited only by the appended claims and the invention encompasses numerous alternatives, modifications and equivalents. For the purpose of example, numerous specific details are set forth in the following description in order to provide a thorough understanding of the present invention. The present invention may be practiced according to the claims without some or all of these specific details. For the purpose of clarity, technical material that is known in the technical fields related to the invention has not been described in detail so that the present invention is not unnecessarily obscured.

In one embodiment, an applicant is given the choice to either specify preferences without reference to a current credit card or to specify the terms of a credit card that the applicant already has and indicate changes that the applicant would like to be made. Once the terms are specified by the applicant, an offer server uses the terms to select an appropriate offer that matches to the extent possible the terms specified by the applicant.

Figure 1 is a flow chart illustrating a process for obtaining a set of requested terms or preferences from an applicant. The process starts at 100 when the user is prompted to select whether the user wants to enter the terms of a current card for comparison or to simply name his own terms. If the applicant selects the option for entering terms of a

current card, then control is transferred to a step 102. In step 102, the description of the current card is obtained from the applicant. Step 102 is described in further detail in connection with Figure 2.

Next, in a step 104, the changes that the applicant would like to make to the current card are obtained from the applicant. Step 104 is described in further detail in Figure 3. In a step 106, the applicant is shown a plurality of sample cards that may satisfy the applicant's preferences. The applicant may be given an opportunity to specify which of the cards is preferable. Based on the applicant's selection of one of the choices, the offer may be further tailored to the applicant's preferences. For example, one card may include a higher introductory rate than the other while the long term rate of the card with the higher introductory rate is lower. Also, an annual fee may be specified for one card and not the other. From the applicant's selection of one of the cards, the importance attached by the applicant to the terms in the selected card that are better than the corresponding terms in the non selected cards is derived. This information may be used along with or instead of priorities expressed by the applicant in prior steps. This step is described in further detail in Figure 4.

In a step 108, applicant information is obtained so that a credit report can be acquired for the applicant and a decision about an appropriate offer of credit may be made. Step 108 is described in further detail in Figure 5. Then, in a step 110, the offer is selected as described in further detail in Figures 7A and 7B. Finally, in step 112, the offer is displayed to the applicant and the process ends at 114.

As shown in Figure 7A, the applicant's specified terms may be used to select from among a set of offers determined using the applicant data. Alternatively, as shown in Figure 7B, the applicant high priority term may be fixed to the value specified by the applicant and the offer generator may attempt to generate an offer that conforms with the rest of the applicant data and requirements of the system that relate risk to required return for credit card accounts.

If instead of specifying the terms of a current card, the applicant selects to name his own terms, then control is transferred to a step 116 and the applicant's requested terms are obtained. Step 116 is described further in connection with Figure 6A. Once the terms are obtained, then control is transferred to a step 118 and the applicant confirms the specified terms. Step 118 is described further in connection with Figure 6B. Once the terms are confirmed, then control is transferred to step 108 and the process continues as described above.

The above description shows how user specified preferences for credit terms may be obtained using three methods. First, the user may specify a current card and specify changes that the user would like to make to that card. Second, the user may specify terms for a credit card. Third, alternative credit cards may be displayed to the user with different terms and the user may select among the cards. In different embodiments, these methods of obtaining user preferences for terms may be used individually or in any combination. In addition to simply obtaining terms, some indication of which terms are most important is obtained from the user .

In the embodiment shown below, the user is given the opportunity to specify which term from among a set of terms is the highest priority term for the user. In other embodiments, the user may rank terms. In embodiments that present two different cards for the user to compare, the priority that the user assigns to certain terms is derived based on the terms of the card that is preferred by the applicant. For example, if a card with a better long term rate but a higher introductory rate is selected, then it is determined that the long term rate is the more important term to the user.

In general, credit card terms are determined based on an assessment of the cost of the risk being taken by the card issuer to provide each term as well as the expected revenue from the card. The risk and the expected revenue are driven by the characteristics of the applicant that are obtained directly from the applicant and also from credit reports obtained for the applicant. For example, the behavior of the applicant (for example, whether the applicant tends to maintain a revolving balance or tends to be a transactor that pays off his balance every month) affects the expected revenue that will be generated by the applicant. The applicant's credit rating and general tendency to pay off debts in a timely manner affects the risk that the applicant will default on the credit line. For a higher credit line, the expected loss as a result of default increases.

These factors as well as others are considered by the offer generating server to determine appropriate offers for the applicant. A large number of appropriate offers may be determined that vary different offer parameters. For example, any number of variations where a higher annual fee supplements the expected income from the card may be determined that allow different credit limits and/or interest rates to be offered to the



applicant. In addition, a higher credit limit or lower interest rate may be provided to the applicant if the applicant transfers a balance which tends to increase the likely revenue expected from the card. Many other factors may influence the terms that may be offered to a given applicant.

Certain terms are requested by the applicant or indicated by the applicant to be important using the processes described above. As a result of the terms specified by the applicant, offers that conform to those terms to the extent possible are selected from the many offers that could be generated for a given applicant.

Figure 2 is a sample web page used in one embodiment to obtain information about a current credit card used by the applicant. The applicant is given the opportunity to specify a number of terms such as the introductory interest rate, the ongoing (long term) interest rate, the annual fee, the credit limit, and the existence of a rewards program.

Figure 3 is an illustration of a web page used to display the terms entered by the applicant for a current card and provide the applicant an opportunity to specify how the applicant would like the terms to be changed and what changes are most important to the applicant. For example, the ongoing interest rate of the current card that was entered by the applicant is displayed and an opportunity to choose from one or more improved interest rates is provided to the applicant in the form of a pick list. In addition, the applicant can select a button for one of the terms indicating that it is the most important term to the applicant. In this manner, the applicant is led through a process of evaluating

the terms of his current credit card and determining how those terms should be changed. An alternative process where the applicant simply describes terms that would be desirable is illustrated in Figure 6A.

Figure 4 is an illustration of a web page that displays the terms of two cards to the applicant and allows the applicant to indicate which card is preferable. The display includes the terms described above and the applicant is presented with buttons that enable the applicant to select one of the cards. As described above, the selection of one of the cards is used to determine what terms are most important to the applicant.

Figure 5 is a diagram illustrating an input screen used to obtain information about the applicant. In some embodiments, the information is obtained before the applicant begins to specify desired credit terms. The applicant provides information about himself from which a credit report can be obtained. Both the applicant information and the credit report information are used to assess the cost of the risk of offering the applicant certain credit terms as well as the expected revenue from the applicant that would result from certain offered terms.

Figure 6A is an illustration of a web page used to obtain desired terms from an applicant. The illustrated terms include interest rate, annual fee, and credit limit as well as the existence of a reward program and the type of card. Other terms such as those described above may also be provided to the applicant such as an introductory interest rate. The applicant specifies the terms requested and indicates which of the terms is most important.

Figure 6B is an illustration of a web page used to confirm the applicant's specification of terms and the selection of the most important term.

Thus, the applicant either specifies terms of a current card and indicates how the applicant would like to have those terms to be changed or specifies desired terms without relating them to a current card. In addition, the applicant specifies what term is the most important term to the applicant. In one embodiment, these terms are used to select an offer from among all the possible offers that may be extended to the applicant based on the applicant's assessed risk and expected revenue.

Figure 7A is a flowchart illustrating a process for using the applicant specified terms to obtain offers to present to the applicant. The process starts at 700. In a step 702, an offer set is determined based on the applicant data. In a step 704, an offer is selected from the offer set that best meets the applicant specified terms. The process ends at 706. Thus, the offer server uses the applicant data entered by the applicant and obtained from the credit report to determine a set of offers. The offer set includes offers that vary different terms to balance the risk taken by the credit card issuer with the expected revenue from the applicant. The selection of offers to be displayed to the applicant is made from the offer set using the applicant specified term as a criteria. For example, if the applicant specifies a low introductory rate as the most important term, then offers with the best low introductory rate or nearly the best possible low introductory rate are selected.

In some embodiments, a hierarchy of terms is established to select the right offer. For example, a subset of offers may first be determined that have the best or near the best values for the terms selected by the applicant as being most important. A further selection of offers to be displayed to the applicant is made by considering the other terms specified by the applicant and choosing the offers in the subset of offers that best conform to the other terms specified by the applicant. In embodiments where terms are ranked by the applicant, then a hierarchical selection of subsets of offers from the original offer set are made according to the ranked priority of the terms specified by the applicant.

In another embodiment, the applicant specified terms are used to drive the determination of an offer set. The process starts at 710. In a step 712, the highest priority term specified by the applicant is fixed and offers are determined that conform to that term and varying other terms so that the risk and expected return are acceptable to the card issuer in a step 714. The process then ends at 716. Thus, the most important terms specified by the applicant may be used to constrain the generation of offers. It may be that no offers can be generated for a term exactly as specified by the applicant. In such a case, the term may be adjusted. In some embodiments, multiple terms specified by the applicant may be used to help generate an offer. In such cases, fuzzy logic may be used to cause the most important terms to the applicant to be best matched by the offer. Terms may be weighted by the applicant and an offer that conforms as much as possible to the weighted terms is generated.

It should be noted that the scheme of generating offers based on assessed applicant risk and expected return and then selecting from among those offers using

applicant specified preferred terms is particularly useful. The applicant specified terms do not complicate the generation of a large set of offers, but are used to select from among those offers a limited set of offers displayed to the applicant for acceptance. By using the applicant's expressed preferences to determine the offers to be displayed, the likelihood of the applicant receiving an offer that will be accepted is greatly enhanced. Because the offer generator can generate a large, diverse group of offers, some guidance from the applicant for selecting among those offers is of great help.

Figure 8A is a block diagram illustrating how an applicant may interact with a server that determines an offer for the applicant. The applicant uses a browser 800 connected via the Internet 802 to a web server 804. Web server 804 connects to a credit bureau 806 and a database 808. In different embodiments, web server 804 is divided among a set of servers performing different functions, for example, one web server may handle sending and receiving web pages and another server may handle the actual underwriting and evaluation of the applicant using data from database 808. In general, the browser may be implemented on a PC or other commonly available computing platform and the server may be implemented on a PC, UNIX workstation or other appropriate computing platform.

Figure 8B is a block diagram illustrating the structure of a typical server or machine used to implement a web browser. A processor 810 is connected to a network interface 812 and a memory 814. In addition an IO interface 816 is provided so that a user may interact with the computer.

Although the foregoing invention has been described in some detail for purposes of clarity of understanding, it will be apparent that certain changes and modifications may be practiced within the scope of the appended claims. It should be noted that there are many alternative ways of implementing both the process and apparatus of the present invention. Accordingly, the present embodiments are to be considered as illustrative and not restrictive, and the invention is not to be limited to the details given herein, but may be modified within the scope and equivalents of the appended claims.

WHAT IS CLAIMED IS: